

## REMARKS

In paragraph 2 of the Office action, claims 1-5, 7, 8, and 10-12 are rejected under 35 U.S.C. § 102(e) as being anticipated by Yun et al. (U.S. Publication No. 2004/0063237) (hereinafter "Yun"). It is the examiner's position that Yun teaches a process comprising "performing certain process steps from the top side of the substrate carrying a plurality of devices, at least certain of the devices having a micro-machined mesh (fig. 1)." It is respectfully submitted that fig. 1 of Yun does not disclose a micro-machined mesh. No mesh is shown in the figure, and a search of the text of Yun for the word "mesh" failed to uncover any instances of that word. Accordingly, Yun does not teach "at least certain of the devices having a micro-machined mesh."

To further distinguish independent claims 1, 7, and 11 from Yun, each of those claims has been amended to add a step of sealing the micro-machined meshes. As stated in the previous paragraph, the word mesh is not found in Yun. It follows that because Yun does not disclose meshes, there can be no possibility that Yun discloses sealing of the meshes. Accordingly, it is applicants' position that independent claims 1, 7, and 11 are in condition for allowance.

Claims 5, 7, and 12 recite two carrier wafers. A first carrier wafer is attached to the top side of the substrate so that certain process steps can be performed from the back side, and a second carrier wafer is attached to the back side of the substrate while at least certain process steps are performed from the top side. Yun does not teach the use of two carrier wafers. Yun teaches the use of a first carrier wafer. However, there is no need for a second carrier wafer as a separate wafer, referred to in Yun as an IC wafer, is bonded to the back side of the MEMS wafer. See Yun, paragraph [0034] which provides as follows:

In an embodiment of the present invention, the external electronics are fabricated on a separate wafer (referred to hereinafter as an IC wafer) that is bonded to the back side of the MEMS wafer using the dummy handling substrate to handle the MEMS wafer during this bonding process. These electronics may be fabricated on the IC wafer using any of a variety of techniques, including various etching and material depositing techniques. The electronics on the IC wafer are typically configured so as to align with various micromachined features that are fabricated on the back side of the

MEMS wafer as described above. The IC wafer may be any type of wafer, including a silicon, polysilicon, silicon-on-insulator (SOI), or multiple stack SOI wafer. The IC wafer can be bonded to the back side of the MEMS wafer using any of a variety of bonding techniques, and the present invention is in no way limited to any particular bonding technique. Bonding the IC wafer to the back side of the MEMS wafer further increases the density of devices for a given chip area.

See also paragraph [0036] which provides, in part:

After the IC wafer is bonded to the back side of the MEMS wafer, the dummy handling substrate is removed from the front side of the MEMS wafer.

Because Yun teaches bonding the MEMS wafer to an IC wafer, Yun teaches away from the use of the second carrier wafer. Accordingly, it is believed that dependent claim 5 is allowable independently of the allowability of the claims from which it depends; this subject matter provides a second reason for the allowability of claim 7 over Yun; and this subject matter provides a basis for allowing claim 12.

At this time, the applicants have not provided arguments in favor of the patentability of the dependent claims (except for claim 5 as discussed above). Applicants reserve the right to submit arguments in favor of the patentability of the dependent claims at a later time should that become necessary.

Applicants have made a diligent effort to place the instant application in condition for allowance. Accordingly, a Notice of Allowance for claims 1-8 and 10-12 is respectfully requested. If the examiner is of the position that the instant application is in condition for

Appl. No. 10/800,470  
Amdt. dated 12 March 2007  
Reply to Office action of 04 January 2007

disposition other than through allowance, the examiner is respectfully requested to contact applicants' attorney at the telephone number below.

Respectfully submitted,

A handwritten signature in cursive script, appearing to read "E. L. Pencoske".

Edward L. Pencoske  
Reg. No. 29,688  
Jones Day  
One Mellon Center  
500 Grant Street, Suite 3100  
Pittsburgh, PA, USA, 15219  
Direct Dial: (412) 394-9531  
Facsimile: (412) 394-7959  
Attorneys for Applicants